

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

**UNITED STATES PATENT AND TRADEMARK OFFICE**

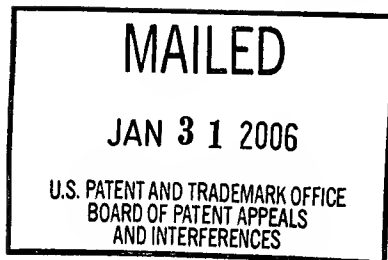
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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Ex parte HARUO ICHIKAWA and AKIRA WAKABAYASHI

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Appeal No. 2005-2210  
Application No. 09/996,974

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ON BRIEF

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Before McQUADE, NASE, and BAHR, Administrative Patent Judges.  
BAHR, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 4, 5 and 8-16, which are all of the claims pending in this application. Claims 1 and 4 were amended to incorporate the limitations of dependent claims 3 and 7 and claims 3 and 7 were canceled subsequent to the final rejection in an amendment filed March 17, 2004.

We REVERSE.

### BACKGROUND

The appellants' invention relates to a method of and apparatus for transferring a plurality of rolls from a roll retainer shaft to a roll loading shaft. Claims 1, 4 and 11 are illustrative of the invention and are reproduced in the appendix to the appellants' brief.

### ***The Applied Prior Art***

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Schiltz	1,907,447	May 9, 1933
Van Breen	4,290,734	Sep. 22, 1981
Read	4,557,515	Dec. 10, 1985
Rauh	4,953,805	Sep. 4, 1990
Swain	5,466,114	Nov. 14, 1995
Sano et al. (Sano)	07-034759	Feb. 3, 1995 <sup>1</sup>
(Japanese patent application publication)		

### ***The Rejections***

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the below-noted rejections, we make reference to the answer (mailed October 20, 2004) for the examiner's complete reasoning in support of the

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<sup>1</sup> We derive our understanding of this document from the computer-generated translation attached to the examiner's answer.

rejections, and to the brief (filed July 26, 2004) and reply brief (filed December 20, 2004) for the appellants' arguments thereagainst.

Claims 1 and 4 stand rejected under 35 U.S.C. § 103 as being unpatentable over Swain in view of Van Breen.<sup>2</sup>

Claims 5 and 10 stand rejected under 35 U.S.C. § 103 as being unpatentable over Swain in view of Van Breen<sup>3</sup> and Rauh.

Claims 8 and 9 stand rejected under 35 U.S.C. § 103 as being unpatentable over Swain in view of Van Breen and Schiltz.

Claims 11-14 stand rejected under 35 U.S.C. § 103 as being unpatentable over Read in view of Swain.

Claim 15 stands rejected under 35 U.S.C. § 103 as being unpatentable over Read in view of Swain and Van Breen.

Claim 16 stands rejected under 35 U.S.C. § 103 as being unpatentable over Read in view of Swain, Rauh and Sano.

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<sup>2</sup> The amendment to claims 1 and 4 subsequent to the final rejection necessitated the altered ground of rejection of claims 1 and 4, which had been rejected under 35 U.S.C. § 102 as being anticipated by Swain in the final rejection.

<sup>3</sup> We, like appellants (brief, page 6), presume that Van Breem is relied upon in this rejection in light of the examiner's inclusion of this reference in the rejection of claims 1 and 4.

### OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

Swain discloses a system for supporting hollow cylinders or substrates 88. The system includes a loading mandrel 110 and a mandrel assembly 10 comprising a tube 14 having a cylindrical cross-section. Within the tube 14 is a shaft 16 having a cam section 87 biased by spring 90 in the direction of the loading mandrel 110. When the button 22 on the end of the shaft 16 is depressed, the shaft 16 moves to the left as illustrated in Figure 1, thereby causing a cam follower 86 to move toward the central longitudinal axis of the shaft 16. The free ends of the spaced rails 42, 44 attached to the cam follower 86 move along with the cam follower 86 toward the central longitudinal axis of the shaft 16. In this "load" position, the disposition of the free ends of the rails 42, 44 and the wheels 66, 64, 62, etc. mounted thereto close to the wall of the tube 14 facilitates loading of a substrate 88 from the loading mandrel 110 onto the mandrel 10. Subsequent twisting of the button 22 causes head 26 of resilient retaining pin 28 to ride out of slot 24 so that when button 22 is thereafter released, spring 90 will urge shaft 16 to move away from bearing post 20 and force the cam follower 86 to ride up on the cam 87, thereby causing the free end of rail assembly 42, 44 to move toward the inner

surface of the hollow cylindrical substrate 88 to support the substrate 88 and to maintain it in a coaxially aligned relationship with tube 14.

Swain also discloses that button 22 may be depressed and twisted either manually or automatically to lock or unlock shaft 16 from a "load" position. For example, the loading mandrel 110 may be suitably configured with a screwdriver blade-like projection located at the end of finger 112 (see Figures 1 and 3).

Swain lacks a mechanism associated with said roll retainer shaft being actuated by a rotating action of a mechanism associated with said roll loading shaft to move said rolls along said roll retainer shaft, as called for in claim 1, or engaging means disposed at an axial center of said roll loading shaft for engaging a ball screw disposed at an axial center of said roll retainer shaft and rotating means for rotating said engaging means of said roll loading shaft to thereby rotate said ball screw, wherein one of said rolls held on said roll retainer shaft is transferred onto said roll loading shaft by a nut which moves upon rotation of said ball screw, as called for in claim 4. Specifically, although Swain discloses a mechanism (button 22, shaft 16, cam 87, cam follower 86, rails 42, 44 and wheels 66, etc.) associated with the mandrel 10 actuated by a mechanism (on finger 112) associated with the loading mandrel 110 to move the rails 42, 44 and wheels mounted thereon between a load position close to the central longitudinal axis of the shaft 16 and a substrate supporting position, and vice versa, to facilitate loading and unloading of the substrates on the mandrel assembly 10, Swain

does not disclose a mechanism for actually performing the function of transferring a substrate onto the mandrel assembly 10 or moving it along the mandrel assembly 10, as called for in claims 1 and 4. Any contention by the examiner that Swain does disclose such a mechanism is simply not supported by the reference.

The examiner's reliance on Van Breen for a suggestion to modify Swain to arrive at the claimed invention is misplaced. Van Breen discloses a magnetic disc stacking and unstacking device comprising a motor 50 which drives a lead screw 48, by means of pulleys 56, 58 and belt 60, to move drive nut 40 axially along hollow cylindrical member 12 to thereby move chains 30, 32. The magnetic discs 18 are supported by exposed nibs (e.g., 63, 64) of the chains and are moved along the cylinder by movement of the chains. Van Breen discloses a mechanism associated with a single shaft (cylinder 12) for moving discs along that shaft. Van Breen provides no teaching or suggestion to use a mechanism on one shaft for actuating a mechanism on a second shaft to move objects along either shaft and thus cannot make up for that which is lacking in Swain.

In light of the above, we cannot sustain the rejection of claims 1 and 4 as being unpatentable over Swain in view of Van Breen. The examiner's additional application of Rauh and Schiltz in rejecting dependent claims 5 and 8-10 provides no cure for the deficiency of the combination of Swain and Van Breen discussed above. It thus follows that the rejections of claims 5 and 10 as being unpatentable over Swain in view of Van

Breen and Rauh and claims 8 and 9 as being unpatentable over Swain in view of Van Breen and Schiltz also cannot be sustained.

We turn our attention now to the examiner's rejections of claims 11-16, each of which is based, at least in part, on the combination of Read in view of Swain. Read discloses a coil handling device comprising a jaw mechanism 12, for gripping the reel 14, comprising a cylindrical housing 30 having jaw levers 44, 44A provided with feet 45, 45A which are selectively moved between the insertion and release position shown in Figure 6, with the feet 45 withdrawn into the cylinder, and the position shown in Figure 5, with the feet extended outwardly from the cylinder to engage the flange 15 of the reel 14. The movement of the jaw levers is accomplished by movement of the handle 67 which in turn moves the cam shaft 63 to move the yoke cam plate 50, the cam plate 50 being provided with inclined cam orifices 53, 54 which engage cam pins 57, 58 to which the jaw levers 44, 44A are fastened. Read lacks a moving mechanism for moving a roll along the roll retainer shaft, much less one which is operable to be actuated by a rotating action of a driving mechanism associated with a roll loading shaft toward which said roll is moved, as called for in claim 11.

As discussed above, Swain broadly teaches moving cylindrical substrates between loading mandrel 110 and mandrel assembly 10, but is silent with respect to how such movement is to be accomplished. Thus, even assuming one of ordinary skill in the art would have been inclined to provide a moving means for moving a roll along

Read's cylindrical housing 30, Swain does not teach or suggest a moving mechanism operable to be actuated by a rotating action of a driving mechanism associated with a roll loading shaft toward which the roll is moved, as called for in claim 11, and thus could not provide any teaching or suggestion to provide such a mechanism in Read's coil handling device.

In light of the above, the rejection of claims 11-14 as being unpatentable over Read in view of Swain cannot be sustained. The examiner's application of Van Breen, Rauh and Sano does not make up for the deficiency in the combination of Read in view of Swain. Accordingly, the rejections of claim 15 as being unpatentable over Read in view of Swain and Van Breen and claim 16 as being unpatentable over Read in view of Swain, Rauh and Sano also cannot be sustained.

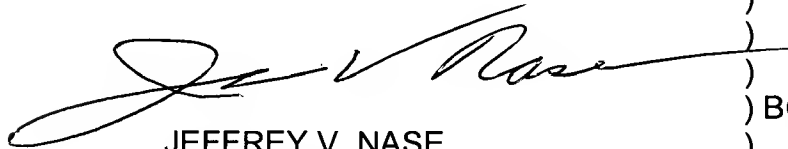


CONCLUSION

To summarize, the decision of the examiner to reject claims under 35 U.S.C.  
§ 103 is REVERSED.

REVERSED

  
JOHN P. McQUADE  
Administrative Patent Judge

  
JEFFREY V. NASE  
Administrative Patent Judge

  
JENNIFER D. BAHR  
Administrative Patent Judge

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